

Notice of Allowability

Application No.

10/791,694

Examiner

Drew E. Becker

Applicant(s)

ZITTEL ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to after-final response of 8/29/07.
2. ☒ The allowed claim(s) is/are 1 and 3-52.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Allowable Subject Matter

1. Claims 1 and 3-52 are allowed.
2. The following is an examiner's statement of reasons for allowance: the method of heating a food product of independent claim 1 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the food product receiving chamber for urging the food product toward the food product outlet, and at least one orifice bank comprised of a plurality of pairs of orifices each for introducing a liquid into a tank disposed inside the housing in which the food product-receiving chamber is received with the orifices spaced apart in a lengthwise direction relative to the tank substantially the length of the tank, introducing food product into the food product-receiving chamber into a liquid heat transfer medium within the tank through the inlet, turbulently discharging a liquid through each one of the plurality of pairs of orifices into the liquid heat transfer medium in the tank, heating the food product in the food product-receiving chamber using the liquid heat transfer medium in the tank with the liquid heat transfer medium having a temperature of at least 120° Fahrenheit, urging the food product in the food product-receiving chamber toward the outlet, removing the food product from the food product-receiving chamber through the outlet, wherein the liquid that is discharged through the orifices at a flow rate of at least 20 gallons per minute per foot of tank length, wherein the orifices in the orifice

bank are oriented to direct the discharged liquid into liquid heat transfer medium in an exiting quadrant of the tank generally toward an axis of rotation of the rotary food product transport mechanism;

the method of heating a food product of independent claim 5 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the food product receiving chamber for urging the food product toward the food product outlet, and a plurality of spaced apart banks of orifices each comprised of a plurality of pairs of orifices each for introducing a fluid into a tank holding a liquid heat transfer medium, introducing food product into the liquid heat transfer medium within the tank through the inlet, discharging a fluid through each one of the plurality of pairs of orifices of each one of the plurality of orifice banks into the liquid heat transfer medium within the tank, heating the food product in the food product-receiving chamber via heat transfer from liquid heat transfer medium having a temperature of at least 120° Fahrenheit, urging the food product in the food product-receiving chamber toward the outlet by rotating the food product transport mechanism, removing the food product from the food product-receiving chamber through the outlet; wherein the fluid discharged from the orifices of at least one of the plurality of orifice banks comprises a liquid at a flow rate of at least 20 gallons per minute per foot of manifold length and at a pressure of at least about 30 pounds per square inch, and wherein each one of the plurality of orifice banks is spaced apart and located so each

one of the orifices of each one of the plurality of orifice banks directs fluid flow into liquid heat transfer medium located in an exiting quadrant of the tank;

the method of heating a food product of independent claim 8 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the food product receiving chamber for urging the food product toward the food product outlet, and a plurality of pairs of orifices each for introducing a fluid into the housing, introducing food product into a liquid heat transfer medium within the housing of the blancher through the inlet, discharging a fluid through at least one of the plurality of pairs of orifices into the heat transfer medium, heating the food product in the food product-receiving chamber, urging the food product in the food product-receiving chamber toward the outlet, removing the food product from the food product-receiving chamber through the outlet, and wherein in the fluid comprises a gas discharged through each one of the orifices into the liquid heat transfer medium within the housing in an exiting quadrant of the blancher toward the perforate food product-receiving chamber at a flow rate of at least 60 cubic feet per minute and at a pressure of at least 2 pounds per square inch;

the method of heating a food product of independent claim 13 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a housing that has a food product inlet and a food product outlet, a rotary food product

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transport mechanism disposed in the food product receiving chamber for urging the food product toward the food product outlet, a first bank comprised of a plurality of pairs of orifices each for introducing a fluid into a liquid heat transfer medium holding tank, and a second bank comprised of a plurality of pairs of orifices each for introducing a fluid into the liquid heat transfer medium holding tank, introducing food product into liquid heat transfer medium within the tank through the inlet, discharging a fluid through at least one of the plurality of pairs of orifices of each orifice bank into the liquid heat transfer medium within the tank, heating the food product in the food product-receiving chamber, urging the food product in the food product-receiving chamber toward the outlet, and removing the food product from the food product-receiving chamber through the outlet, and wherein the fluid comprises a gas discharged through each one of the orifices of one of the orifice banks into liquid heat transfer medium in an exiting quadrant of the blancher, wherein the fluid comprises a liquid discharged through each one of the orifices of the other one of the orifice banks into liquid heat transfer medium in the exiting quadrant of the blancher;

the method of heating a food product of independent claim 17 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the food product receiving chamber for urging the food product toward the food product outlet, a first bank of a plurality of pairs of orifices each for introducing a fluid into the housing, and a second bank of a plurality of

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pairs of orifices each for introducing a fluid into the housing, introducing food product into a liquid heat transfer medium within the housing of the blancher through the inlet wherein the liquid heat transfer medium has a temperature high enough to blanch the food product, discharging a fluid through each one of the plurality of pairs of orifices of each one of the orifice banks into the liquid heat transfer medium, heating the food product in the food product-receiving chamber via heat transfer from the liquid heat transfer medium, urging the food product in the food product-receiving chamber toward the outlet, removing the food product from the food product-receiving chamber through the outlet, wherein the food products have a density of at least 55 lb/ft³, water is discharged from the orifices of one of the orifice banks into liquid heat transfer medium in an exiting quadrant of the blancher at a flow rate of at least 20 gpm per foot of manifold length, air is discharged from the orifices of the other one of the orifice banks into liquid heat transfer medium in the exiting quadrant of the blancher at a flow rate of at least 60 SCFM;

the method of heating a food product of independent claim 20 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the food product receiving chamber for urging the food product toward the food product outlet, a first elongate longitudinally extending manifold comprised of a plurality of pairs of orifices each for introducing a fluid into the housing, and a second longitudinally extending manifold comprised of a plurality of pairs

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of orifices each for introducing a fluid into the housing, introducing food product into a water heat transfer medium within the housing of the blancher through the inlet, discharging a fluid through each one of the plurality of pairs of orifices of each one of the first and second manifolds into the water heat transfer medium, heating the food product in the food product-receiving chamber, urging the food product in the food product-receiving chamber toward the outlet, removing the food product from the food product-receiving chamber through the outlet, wherein the food products have a density of at least 55 lb/ft³ water is discharged at a flow rate of at least 20 gpm per foot of manifold length from the orifices of each one of the manifolds into water heat transfer medium in an exiting quadrant of the blancher and into water heat transfer medium in the perforate food product-receiving chamber so it impinges against food product in the perforate food product-receiving chamber, wherein the water discharged from the plurality of pairs orifices of each one of the first and second manifolds is recirculated water heat transfer medium withdrawn from within the blancher housing;

the method of heating a food product of independent claim 23 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the food product receiving chamber for urging the food product toward the food product outlet, [[and]] first manifold comprised of a plurality of pairs of orifices each for introducing a fluid into the housing, and a second manifold comprised of a plurality of pairs of orifices each for introducing a fluid into the housing,

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introducing food product into a liquid heat transfer medium within the housing of the blancher through the inlet, discharging a fluid through each at least one of the plurality of pairs of orifices of the first and second manifolds into the liquid heat transfer medium, heating the food product in the food product-receiving chamber, urging the food product in the food product-receiving chamber toward the outlet, removing the food product from the food product-receiving chamber through the outlet, wherein the blancher has a length, the food products being heated in the blancher have a density of at least 55 lb/ft³, water is discharged from each one of the plurality of pairs of orifices of each one of the first and second manifolds at a flow rate of at least 20 gpm per foot of manifold into liquid heat transfer medium in the blancher housing located in an exiting quadrant of the blancher toward and into the perforate food product-receiving chamber, air is discharged at a flow rate of at least 10 SCFM per foot of blancher length and a pressure of at least 80 psi;

the method of heating a food product of independent claim 26 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the food product receiving chamber for urging the food product toward the food product outlet, and at least one manifold comprised of a plurality of pairs of orifices each for introducing a fluid into the housing, introducing food product into a liquid heat transfer medium within the housing of the blancher through the inlet having a temperature high enough to blanch the food product during its residency

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time in the liquid heat transfer medium in the blancher housing, withdrawing liquid heat transfer medium from within the housing of the blancher, discharging the withdrawn liquid heat transfer medium through each one of the plurality of pairs of orifices of the manifold into the heat transfer medium disposed in an exiting quadrant of the blancher at a flow rate of at least 20 gpm per foot of blancher length substantially along the entire length of the blancher housing, heating the food product in the food product-receiving chamber, urging the food product in the food product-receiving chamber toward the outlet by rotating the rotary food product transport mechanism, removing the food product from the perforate food product-receiving chamber through the outlet;

the method of heating a food product of independent claim 29 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the food product receiving chamber for urging the food product toward the food product outlet, and at least one longitudinally extending manifold disposed outside the blancher housing that is comprised of a plurality of pairs of orifices each for introducing a fluid into the housing, introducing food product into a liquid heat transfer medium within the housing of the blancher through the inlet with the liquid heated to a temperature high enough to at least pasteurize the food product, discharging liquid heat transfer medium withdrawn from within the blancher housing through each one of the plurality of pairs of orifices of the at least one manifold back into the liquid heat transfer medium within the blancher housing, heating the food product in

the food product-receiving chamber using the liquid heat transfer medium, urging the food product in the food product-receiving chamber toward the outlet by rotating the rotary food product transport mechanism, removing the food product from the food product-receiving chamber through the outlet, wherein the blancher has a length, the food products have a density of at least 55 lb/tt³, liquid heat transfer medium is discharged from each one of the plurality of pairs of orifices of the at least one manifold substantially along the entire length of the blancher housing at a flow rate of at least 20 gpm per foot of blancher length and at a pressure of at least about 30 psi into an exiting quadrant of the blancher;

the method of heating a food product of independent claim 32 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the food product receiving chamber for urging the food product toward the food product outlet, and a plurality of pairs of orifices each for introducing a fluid into the housing, introducing food product into a heat transfer medium within the housing of the blancher through the inlet, discharging a fluid through each one of the plurality of pairs of orifices into the heat transfer medium, heating the food product in the food product-receiving chamber, urging the food product in the food product-receiving chamber toward the outlet, removing the food product from the food product-receiving chamber through the outlet, wherein the blancher has a length, the food products have a density of at least 55 lb/ft³, there is at least one orifice through

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which water is discharged at a flow rate of at least 20 gpm per foot of blancher length and a pressure of at least 30 psi into liquid heat transfer medium in an exiting quadrant of the blancher and there is at least one orifice through which air is discharged at a flow rate of at least 10 SCFM per foot of blancher length and a pressure of at least 80 psi into liquid heat transfer medium in the exiting quadrant of the blancher;

the method of heating a food product of independent claim 35 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the food product receiving chamber for urging the food product toward the food product outlet, and a plurality of pairs of orifices arranged in a lengthwise direction substantially the length of the blancher housing with each orifice for introducing a fluid into the housing, introducing food product into a liquid heat transfer medium within the housing of the blancher through the inlet, discharging a fluid through each one of the plurality of pairs of orifices into the liquid heat transfer medium, heating the food product in the food product-receiving chamber, urging the food product in the food product-receiving chamber toward the outlet, removing the food product from the food product-receiving chamber through the outlet, wherein the blancher has a length, the food products have a density of no greater than 55 lb/ft³, air is discharged from each one of the plurality of pairs of orifices into the liquid heat transfer medium in an exiting quadrant of the blancher at a flow rate of at least 60 SCFM per foot of blancher length and a pressure of at least 2 psi;

the method of heating a food product of independent claim 38 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the food product receiving chamber for urging the food product toward the food product outlet, and a plurality of pairs of orifices arranged in a lengthwise direction substantially the length of the blancher housing with each orifice for introducing a fluid into the housing, introducing food product into a liquid heat transfer medium within the housing of the blancher through the inlet, discharging a fluid through each one of the plurality of pairs of orifices into the heat transfer medium, heating the food product in the food product-receiving chamber, urging the food product in the food product-receiving chamber toward the outlet, removing the food product from the food product-receiving chamber through the outlet, wherein the blancher has a length, the food products have a density of no greater than 55 lb/ft³, air is discharged from each one of the plurality of pairs of orifices into the liquid heat transfer medium in an exiting quadrant of the blancher at a flow rate of at least 10 SCFM per foot of blancher length and a pressure of at least 80 psi;

the method of heating a food product of independent claim 41 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a food product-receiving chamber disposed in a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the food product receiving chamber for urging the food product

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toward the food product outlet, a first manifold having a plurality of pairs of orifices each for introducing a fluid into the housing, and a second manifold having a plurality of pairs of orifices each for introducing a fluid into the housing, introducing food product into a liquid heat transfer medium within the housing of the blancher through the inlet, discharging a fluid through each one of the plurality of pairs of orifices into the heat transfer medium, heating the food product in the food product-receiving chamber, urging the food product in the food product-receiving chamber toward the outlet, removing the food product from the food product-receiving chamber through the outlet, wherein each manifold is 1) oriented in a lengthwise direction relative to the food product receiving chamber with the manifold orifices directing flow of liquid heat transfer medium toward the food product receiving chamber and 2) located outwardly of a lengthwise-extending centerline of the blancher with each one of the manifold orifices directing fluid flow into an exiting quadrant thereof defined from where the rotating food product transport mechanism emerges from the heat transfer medium to adjacent the centerline but not passing to or beyond the centerline;

the method of heating a food product of independent claim 42 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a food product-receiving chamber disposed in a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the food product receiving chamber for urging the food product toward the food product outlet, and a manifold having a plurality of pairs of orifices distributed along substantially the length of the blancher housing each for introducing a

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fluid into the housing, introducing food product into a liquid heat transfer medium within the housing of the blancher through the inlet, discharging a fluid through each one of the plurality of pairs of orifices into the heat transfer medium, heating the food product in the food product-receiving chamber, urging the food product in the food product-receiving chamber toward the outlet, removing the food product from the food product-receiving chamber through the outlet, the fluid is a liquid that is discharged through the orifices at a flow rate of at least 20 gallons per minute per foot of manifold, wherein the manifold is 1) oriented in a lengthwise direction relative to the food product receiving chamber with the manifold orifices directing flow of liquid heat transfer medium toward the food product receiving chamber and 2) located outwardly of a lengthwise-extending centerline of the blancher with each one of the manifold orifices directing fluid flow into an exiting quadrant thereof defined from where the rotating food product transport mechanism emerges from the heat transfer medium to adjacent the centerline but not passing to or beyond the centerline;

the method of heating a food product of independent claim 43 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving and generally cylindrical drum chamber disposed in a housing that has a food product inlet, a food product outlet, and comprises a liquid heat transfer medium holding tank, a rotary auger having a plurality of auger flights disposed in the drum for urging the food product toward the food product outlet, a first manifold having a plurality of pairs of orifices each for introducing a fluid into the tank and drum and a second manifold having a plurality of

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pairs of orifices each for introducing a fluid into the tank and drum, introducing food product into liquid heat transfer medium disposed in the drum through the inlet with the liquid heat transfer medium having a temperature of at least 120° Fahrenheit, discharging a fluid through each one of the plurality of pairs of orifices of each one of the manifolds into the liquid heat transfer medium, heating the food product in the food product-receiving chamber, urging the food product in the food product-receiving chamber toward the outlet by rotating the auger, removing the food product from the drum through the outlet, the fluid is a liquid that is discharged through each one of the orifices of at least one of the manifolds at a flow rate of at least 20 gallons per minute per foot of manifold, wherein each manifold is 1) oriented in a lengthwise direction relative to the perforate drum with the orifices of the manifold directing flow of liquid heat transfer medium toward the perforate drum and 2) located outwardly of a lengthwise-extending generally vertical centerline of the blancher in an exiting quadrant thereof defined from where at least one of the auger flights of the rotary auger emerges from the liquid heat transfer medium to adjacent the centerline but not passing to or beyond the centerline;

the method of heating a food product of independent claim 44 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the perforate food product receiving chamber for urging the food product toward the food product outlet, a first manifold having a plurality

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of pairs of orifices each for introducing a fluid into the housing, and a second manifold having a plurality of pairs of orifices each for introducing a fluid into the housing, introducing food product into a heated liquid heat transfer medium within the housing of the blancher through the inlet, discharging a fluid through each one of the plurality of pairs of orifices into the heat transfer medium, heating the food product in the perforate food product-receiving chamber using the heat transfer medium, urging the food product in the perforate food product-receiving chamber toward the outlet by rotating the food product transport mechanism, removing the food product from the perforate food product-receiving chamber through the outlet, wherein each manifold is 1) oriented in a lengthwise direction relative to the food product receiving chamber with each one of the plurality of the orifices of each manifold each directing a separate flow of fluid liquid heat transfer medium toward and into the perforate food product receiving chamber and 2) located outwardly of a lengthwise-extending generally vertical centerline of the blancher with each one of the manifold orifices directing fluid flow into an exiting quadrant thereof defined from where the rotating food product transport, mechanism emerges from the heat transfer medium to adjacent the centerline but not passing to or beyond the centerline, wherein a liquid is discharged from the orifices of one of the manifolds into heat transfer medium located in both the exiting quadrant and the perforate food product-receiving chamber and a gaseous or vaporous fluid is discharged from the orifices of the other one of the manifolds into heat transfer medium located in both the exiting quadrant and the perforate food product-receiving chamber,

the method of heating a food product of independent claim 45 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a housing that has a food product inlet and a food product outlet and comprises a liquid heat transfer medium holding tank, a helical auger rotary food product transport mechanism disposed in the food product-receiving chamber for urging the food product toward the food product outlet, a first manifold having a plurality of pairs of orifices each for introducing a fluid into the liquid heat transfer medium in the tank housing, and a second manifold having a plurality of pairs of orifices each for introducing a fluid into the liquid heat transfer medium in the tank, introducing food product into a liquid heat transfer medium within the tank of the blancher by introducing the food product through the inlet into the perforate food product-receiving chamber, discharging a fluid through each one of the plurality of pairs of orifices into the heat transfer medium, heating the food product in the food product-receiving chamber by heat transfer from the liquid heat transfer medium to the food product, urging the food product in the food product-receiving chamber toward the outlet by rotating the helical auger rotary food product transport mechanism, removing the food product from the food product-receiving chamber through the outlet, the fluid is a liquid that is discharged through the orifices of the first and second manifolds at a flow rate of at least 20 gallons per minute per foot of manifold length, wherein each manifold is 1) oriented in a lengthwise direction relative to the food product receiving chamber with its orifices directing flow of liquid heat transfer medium toward the perforate food product-receiving chamber and 2) located

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outwardly of a lengthwise-extending generally vertical centerline of the blancher with each one of the orifices directing fluid flow into an exiting quadrant thereof of the tank defined from where the helical auger rotating food product transport mechanism emerges from the liquid heat transfer medium in the tank to adjacent the centerline but not passing to or beyond the centerline;

the method of heating a food product of independent claim 47 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a tank of a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the food product receiving chamber for urging food product received in the food product-receiving chamber toward the food product outlet, and a manifold having a plurality of pairs of orifices each for introducing a fluid into a liquid heat transfer medium in the tank, introducing food product into the food product-receiving chamber through the inlet and into liquid heat transfer medium received in the tank extending into the food product-receiving chamber, discharging a fluid through each one of the plurality of pairs of orifices into the heat transfer medium, heating the food product in the food product-receiving chamber, urging the food product in the food product-receiving chamber toward the outlet, removing the food product from the food product-receiving chamber through the outlet wherein the fluid is a liquid that is discharged through each one of the orifices at a flow rate of at least 20 gallons per minute per foot of manifold length, the manifold is 1) oriented in a lengthwise direction relative to the food product receiving chamber with its orifices directing flow of

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liquid heat transfer medium toward the food product receiving chamber and 2) located outwardly of a lengthwise-extending generally vertical blancher bisecting centerline of the blancher such that each one of the manifold orifices direct fluid flow into an exiting quadrant thereof defined from where the rotating food product transport mechanism emerges from the heat transfer medium to adjacent the centerline but not passing to or beyond the centerline; and wherein at least four thousand five hundred pounds of food product per hour is removed;

the method of heating a food product of independent claim 48 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a generally cylindrical perforate food product-receiving drum disposed in a housing that comprises a tank and comprises a food product inlet and a food product outlet, a rotary auger disposed in the food product receiving drum for urging food product received in the perforate food product-receiving drum toward the food product outlet, and a manifold comprising a plurality of pairs of outwardly projecting orifices each for introducing a fluid into an aqueous heat transfer medium received in the tank, introducing a plurality of pairs of pieces of food product into an aqueous heat transfer medium received in the tank and disposed in the perforate food product-receiving drum via the inlet, discharging a fluid through each one of the plurality of pairs of orifices of the manifold into the aqueous heat transfer medium, heating the plurality of pairs of pieces of food product in the perforate food product-receiving drum via heat transfer from the aqueous heat transfer medium having been heated to a temperature of at least 120° Fahrenheit, urging the plurality of pairs of pieces of food

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product in the perforate food product-receiving drum chamber toward the outlet by rotation of the rotary auger, removing the plurality of pairs of pieces of food product from the perforate food product-receiving drum through the outlet, the fluid that is discharged through each one of the orifices comprises an aqueous liquid that is discharged at a flow rate and at a pressure, wherein the manifold is 1) oriented in a lengthwise direction relative to the food product receiving chamber with the orifices of the manifold directing flow of fluid toward the perforate food product-receiving drum and 2) located outwardly of a lengthwise-extending centerline of the blancher with each one of the orifices directing fluid flow into an exiting quadrant thereof defined from where the rotating rotary auger emerges from the heat transfer medium to adjacent the centerline but not passing to or beyond the centerline, wherein there is at least eight inches of depth of pieces of food product in the perforate food product-receiving drum chamber, and wherein the manifold extends substantially the length of the tank;

the method of heating a food product of independent claim 49 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a tank of a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the food product receiving chamber for urging food product received in the food product-receiving chamber toward the food product outlet, and a manifold having a plurality of pairs of orifices each for introducing a fluid into a liquid heat transfer medium in the tank, introducing food product into the food product-receiving chamber through the inlet and into liquid heat transfer medium

received in the tank extending into the food product-receiving chamber, discharging a fluid through each one of the plurality of pairs of orifices into the heat transfer medium, heating the food product in the food product-receiving chamber, urging the food product in the food product-receiving chamber toward the outlet; and removing the food product from the food product-receiving chamber through the outlet, the fluid is a liquid that is discharged through each one of the orifices at a flow rate of at least 20 gallons per minute per foot of manifold length, wherein the manifold is 1) oriented in a lengthwise direction relative to the food product receiving chamber with its orifices directing flow of liquid heat transfer medium toward the food product receiving chamber and 2) located outwardly of a lengthwise-extending generally vertical blancher bisecting centerline of the blancher such that each one of the manifold orifices direct fluid flow into an exiting quadrant thereof defined from where the rotating food product transport mechanism emerges from the heat transfer medium to adjacent the centerline but not passing to or beyond the centerline; and wherein at least eight thousand pounds of food product per hour is removed;

the method of heating a food product of independent claim 50 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a tank of a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the food product receiving chamber for urging food product inside the food product-receiving chamber toward the food product outlet, a first manifold having a plurality of pairs of orifices each for introducing a fluid into the

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tank and the food product receiving chamber, and a second manifold having a plurality of pairs of orifices each for introducing a fluid into the tank and the food product receiving chamber, introducing food product into the food product-receiving chamber through the inlet and into a liquid heat transfer medium received in the tank and extending into the food product-receiving chamber, discharging a fluid through each one of the plurality of pairs of orifices into the heat transfer medium, heating the food product in the food product-receiving chamber, urging the food product in the food product-receiving chamber toward the outlet, removing the food product from the food product-receiving chamber through the outlet, the fluid is a liquid that is discharged through each one of the orifices of at least one of the manifolds at a flow rate of at least 20 gallons per minute per foot of manifold length, wherein each manifold is 1) oriented in a lengthwise direction relative to the food product receiving chamber with its orifices directing flow of liquid heat transfer medium toward the food product receiving chamber and 2) located outwardly of a lengthwise-extending centerline of the blancher with each one of the orifices directing fluid flow into [[in]] an exiting quadrant thereof defined from where the rotating food product transport mechanism emerges from the heat transfer medium to adjacent the centerline but not passing beyond the centerline; and wherein at least eight thousand pounds of food product having a density of at least 55 lb/ft³ is removed per hour;

the method of heating a food product of independent claim 51 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in

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a housing that has a food product inlet and a food product outlet and that is capable of holding heated water as a heat transfer medium, a rotary food product transport mechanism disposed in the food product-receiving chamber for urging food product received in the food product-receiving chamber toward the food product outlet, a first manifold having a plurality of orifices each for introducing a fluid into heat transfer medium in the housing, and a second manifold having a plurality of pairs of orifices each for introducing a fluid into heat transfer medium in the housing, and a recirculation system comprising an intake through which fluid from within the blancher can be withdrawn and delivered to at least one of the first and second manifolds, and a pump in fluid-flow communication with the intake for drawing fluid from within the blancher and communicating it to one of the first and second manifolds; introducing food product into a heat transfer medium within the housing through the inlet, withdrawing fluid from within the housing and delivering it to one of the first and second manifolds, discharging fluid through each one of the plurality of pairs of orifices of the first and second manifolds into the heat transfer medium, heating the food product in the food product-receiving chamber via heat transfer from the heat transfer medium, urging the food product in the food product-receiving chamber toward the outlet, removing the food product from the food product-receiving chamber through the outlet, the fluid is a liquid that is discharged through each one of the orifices of at least one of the manifolds comprises water, the first and second manifolds are spaced apart and have each one of the plurality of orifices of each manifold oriented to direct fluid discharged from each orifice into an exiting quadrant in the housing toward the food product-receiving

chamber impinging against food product disposed in heat transfer medium in the exiting quadrant;

the method of heating a food product of independent claim 52 defines over the prior art of record because the prior art does not teach, suggest, nor render obvious providing a blancher including a perforate food product-receiving chamber disposed in a tank of a housing that has a food product inlet and a food product outlet, a rotary food product transport mechanism disposed in the food product receiving chamber for urging food product inside, the food product-receiving chamber toward the food product outlet, a first manifold having a plurality of pairs of orifices each for introducing a fluid into the tank and the food product-receiving chamber he, using, and a second manifold having a plurality of pairs of orifices each for introducing a fluid into the tank and the food product-receiving chamber, introducing food product into the food product-receiving chamber through the inlet and into a liquid heat transfer medium received in the tank and extending into the food product-receiving chamber, discharging a fluid through each one of the plurality of pairs of orifices into the heat transfer medium, heating the food product in the food product-receiving chamber, urging the food product in the food product-receiving chamber toward the outlet, removing the food product from the food product-receiving chamber through the outlet, the fluid is a liquid that is discharged through each one of the orifices of at least one of the manifolds at a flow rate of at least 20 gallons per minute per foot of manifold length, wherein each manifold is 1) oriented in a lengthwise direction relative to the food product receiving chamber with its orifices directing flow of liquid heat transfer medium toward the food product receiving chamber

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and 2) located outwardly of a lengthwise-extending centerline of the blancher with each one of the orifices directing fluid flow into an exiting quadrant thereof defined from where the rotating food product transport mechanism emerges from the heat transfer medium to adjacent the centerline but not passing to or beyond the centerline, and wherein at least eight inches of food product depth is heated and at least eight thousand pounds of food product per hour is removed.

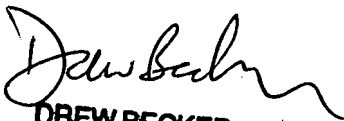
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Drew E. Becker whose telephone number is 571-272-1396. The examiner can normally be reached on Mon.-Fri. 8am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on 571-272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


DREW BECKER
PRIMARY EXAMINER
9-7-07